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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,354	06/29/2001	Karl-Heinz Wienand	927-077US (P09686 US)	2262

570 7590 09/19/2002

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PHILADELPHIA, PA 19103

EXAMINER

DEJESUS, LYDIA M

ART UNIT	PAPER NUMBER
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2859

DATE MAILED: 09/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.



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09/896,354

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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EXAMINER

ART UNIT	PAPER
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7

DATE MAILED:

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Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/896,354

Applicant(s)

WIENAND ET AL.

Examiner

Lydia M. De Jesús

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) is/are withdrawn from consideration.
- 5) ☐ Claim(s) is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) is/are objected to.
- 8) ☐ Claim(s) are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5,6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s).
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement filed June 29, 2001 has been placed of record and the references cited therein have been considered.

3. The information disclosure statement filed January 30, 2002 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

It should be noted that the papers filed on January 30, 2002 (certificate of mailing dated January 9, 2002) have not been made part of the permanent records of the United States Patent and Trademark Office (Office) for this application (37 CFR 1.52(a)) because of damage from the United States Postal Service irradiation process. The above-identified papers, however, were not so damaged as to preclude the USPTO from making a legible copy of such papers. Therefore, the Office has made a copy of these papers, substituted them for the originals in the file, and stamped that copy:

COPY OF PAPERS ORIGINALLY FILED

If applicant wants to review the accuracy of the Office's copy of such papers, applicant may either inspect the application (37 CFR 1.14(d)) or may request a copy of the Office's records of such papers (*i.e.*, a copy of the copy made by the Office) from the Office of Public Records for the fee specified in 37 CFR 1.19(b)(4). Please do **not** call the Technology Center's Customer Service Center to inquiry about the completeness or accuracy of Office's copy of the above-

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identified papers, as the Technology Center's Customer Service Center will **not** be able to provide this service.

If applicant does not consider the Office's copy of such papers to be accurate, applicant must provide a copy of the above-identified papers (except for any U.S. or foreign patent documents submitted with the above-identified papers) with a statement that such copy is a complete and accurate copy of the originally submitted documents. If applicant provides such a copy of the above-identified papers and statement within **THREE MONTHS** of the mail date of this Office action, the Office will add the original mailroom date and use the copy provided by applicant as the permanent Office record of the above-identified papers in place of the copy made by the Office. Otherwise, the Office's copy will be used as the permanent Office record of the above-identified papers (*i.e.*, the Office will use the copy of the above-identified papers made by the Office for examination and all other purposes). This three-month period is not extendable.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

- (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
- (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

5. Claims 1-3, 6 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Betzner et al. [hereinafter Betzner].

Betzner discloses a sensor for detecting a temperature of a fluid in the hollow space of a housing, comprising: a measurement element [22] arranged in a protective tube of a sensor housing [25], which is closed on one end, and a connection piece [30] firmly attached to the sensor housing, the protective tube being adapted to project at least with its tip into an opening of the hollow space-housing where it can be sealed off from outside atmosphere using an elastic O-

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ring/gasket [46], wherein the measuring element [22] is arranged in a tip region of the protective tube on one end of a longitudinally extending circuit board [14] and is connected via strip conductors [16a,16b] to the plug arrangement [(20a,20b) + 30] positioned on an opposite end of the circuit board, wherein the plug arrangement is surrounded by a screw sheath [42] of the sensor housing, which is firmly connected to the protective tube and which is provided with a threading adapted to project into the hollow space-housing for purposes of mounting, the screw sheath having a flange extending in a radial direction, as shown in Figures 4 and 7.

Said screw sheath is provided with an annular edge arranged coaxially to the threading, on a face of the sheath facing away from the protective tube for attaching the connection piece [30]. Said connection piece is stopped in its plug-in position against axial shifting by said annular flange [44] of the edge.

Said measuring element is constructed a temperature-dependent resistor i.e., thermistor. Said sensor is adapted for measuring a temperature in a flowing liquid i.e., coolant, or gaseous medium i.e., exhaust gas in a vehicle.

Said measurement element is considered to be connectable to an evaluation device via said plug arrangement [(20a, 20b) +30].

As discussed above, said screw sheath has a flange extending in a radial direction, as shown in Figures 4 and 7, which is considered capable of providing a press-on surface for an o-ring for sealing off an opening of the hollow- space-housing.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Betzner in view of Ciaravino et al. [hereinafter Ciaravino].

Betzner discloses a sensor as claimed, as stated above in paragraph 5, but fails to show said connection piece [30] being secured against turning relative to the screw sheath by locking beads and/or recesses.

Ciaravino teaches the use of recesses [18] in combination with bead/tabs [130] to prevent rotation of a measuring element [rings 92] with respect to the probe housing.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add locking beads and corresponding recesses to the interface between the connection piece and the screw sheath of the sensor disclosed by Betzner, as suggested by Ciaravino, in order to simplify installation.

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9. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Betzner in view of Carlson.

Betzner discloses a sensor as claimed, as stated above in paragraph 5, but fails to show said measurement element being embedded in heat-conducting paste.

However, Carlson shows that it is very well known in the art to couple a thermistor [16] to the conductors [13, 14] provided on a substrate by embedding the thermistor [16] in a heat-conducting paste [18, 19].

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to couple the conductor strips and the measuring element of the sensor disclosed by Betzner by embedding the measuring element into a heat conducting paste, as taught by Carlson, in order to provide conductive connections and structural adherence between the measuring element and the conductors.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Krohn discloses sensing devices for mounting in chamber walls. Kuzuoka discloses a thermistor type temperature sensor. O'Connel et al. disclose a temperature sensor with an improved thermal barrier. Shoji et al. and Takahashi et al. disclose temperature sensors. Fukaya et al. disclose a temperature sensor with thermistor housed in blocked space having ventilation. Schmermund discloses a resistance thermometer probe. Foreign Patent Documents

JP01023130A and JP57196122A disclose related apparatus.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lydia M. De Jesús whose telephone number is (703) 306-5982.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego F.F. Gutierrez can be reached on (703) 308-3875. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.



Diego F.F. Gutierrez
Supervisory Patent Examiner
Technology Center 2800

LDJ
September 17, 2002